

Decarbonization Regulations of the EU

Striving to be the **World's First Climate Neutral Continent** BIPC BUSAN, 2023.11.28

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EU climate ambition for 2030 & 2050

European Climate Law of June 2021:

- Union-wide **climate-neutrality** objective for **2050**
- 2030 target of at least 55% net GHG emissions reduction
- Recognition of the need to enhance the EU's carbon sink





Source: Source: Communication 'Stepping up Europe's 2030 climate ambition – Investing in a climate-neutral future for the benefit of our people', European Commission, 2020

1. The 'Fit for 55' (decarbonisation) package



Revision of the EU <u>Emissions Trading System (ETS)</u>

- Increase emissions reductions by 2030 to -62% (2005)
- Phasing-out of free allowances between 2026-2034 in line with phase-in of CBAM
- Increased Funding: Market Stability Reserve, Innovation Fund, and Modernization Fund
- Separate ETS for fuels use in road transport and buildings
- Extension to emissions from Maritime Sector from 2024
- Revenues shall entirely be used for climate purposes

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Carbon Border Adjustment Mechanism (CBAM)

- Background: Carbon Leakage

- Definition: refers to the situation that occurs if, for reasons of costs related to climate policies, businesses transfer production to other countries with laxer emission constraints. This can even lead to an increase in total emissions !
- \rightarrow **Options:**
- A) Low carbon price

B) Free allowances (EU approach so far): the production from sectors and subsectors exposed to a significant risk of carbon leakage receives a higher share of free allowances compared to the other industrial installations

C) Equal pricing of imports (CBAM = new EU approach)



CBAM - Key Principles





CBAM – Covered Sectors

□ In the **first phase**:



CEMENT IRON & STEEL ALUMINIUM

FERTILISER

HYDROGEN

ELECTRICITY

□ Selected on the basis of 3 criteria:

- ✓ High risk of carbon leakage (High carbon emissions; High level of trade)
- ✓ Covering more than >45% of CO2 emissions of ETS sectors
- ✓ Practical feasibility

□ Includes selected precursors and few downstream products (some iron and steel products)

□ In a **second stage**, possible extension to other sectors



CBAM – Covered Emissions (transitional phase)



CBAM – Gradual Implementation



Revised Energy <u>Efficiency</u> Directive (EED)

- Reinforcement of the Energy Efficiency First Principle
- Energy efficiency needs to be improved across the entire energy supply chain
- Increased energy efficiency target: goal of consuming at least 11.7% less energy by 2030 compared to the projected energy use for 2030 based on the 2020 reference scenario
- Focus on policy areas with greatest potential for energy savings and where harmonisation across EU is needed - this includes industry, the public sector, the construction and renovation of buildings



Energy Performance in Buildings Directive (EPBD)

Buildings account for:



- All New Buildings to be Zero-Emission by 2030,
- New Public Buildings to be Zero-Emission by 2027
- Upgrade of 15% worst-performing EU building stock
- Roll-out charging infrastructure in buildings



<u>Renewable</u> Energy Directive (RED II+)

- Increase the European renewables target for 2030 from 32% to 40%
- Faster permitting procedures for renewables
- <u>Solar energy</u>: new target of 320 GW by 2025 and European Rooftop Initiative
- <u>Heat pumps</u>: Doubling the deployment rate to a total of 10 million units over the next 5 years
- Sustainable bioenergy reinforced criteria in line with the EU Biodiversity Strategy

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Evolution of RE targets for 2030

Reaction to War in Ukraine: RePower EU



- Massive acceleration & expansion of renewable energy
- Increasing the RED target: <u>45% by 2030</u>
- Accelerating & improving permit-granting
 processes
- New measures, inter alia a market mechanism to limit excessive gas prices, oil price cap and temporary emergency measures



EU Wind Power Energy

- Wind power energy expected to grow within EU from 204 GW in 2022 to more than 500 GW in 2030
- Offshore Wind deployment:
- Member States agreed on ambitious targets for 2030 (109-112 GW), 2040 (215-248 GW) and 2050 (281-354 GW)
- Based on capacity of 16.3 GW in 2022, more than 12 GW / year have to be installed on average (= 10 times more than the new 1.2 GW installed in 2022)



EU Wind Power Action Plan

Actions announced on 24 October 2023:

- Acceleration of deployment through increased predictability and faster permitting
- Improved auction design
- Facilitation of access to finance
- Fair and competitive international environment
- Skills development
- Work with industry and Member States on **EU Wind Charter**



Gas Package Legislation

Revision of Regulation on Natural Gas Transmission Networks & Revision of Directive on Common Rules for the Internal Market on Natural Gas

- Creates conditions for shift from fossil natural gas to renewable and low-carbon gases, in particular biomethane and hydrogen
- EU hydrogen targets by 2030:
 - 40 GW of renewable hydrogen electrolysers
 - 10 million tons of renewable hydrogen produced in EU
- Fosters integrated network planning between electricity, gas & hydrogen networks





Revision of the CO2 Standards for <u>Cars & Vans</u> <u>Regulation</u>

- Increased CO2 emissions reduction targets for new cars & vans:
- By 2030: 55% for new cars
 - 50% for new vans (compared to 2021 levels)



- By 2035: 100% for both new cars & vans
- Zero- and Low-Emission Vehicle (ZLEV) incentive mechanism (2025 to 2029) with benchmarks of 25% for cars and 17% for vans



Regulation on Emissions from <u>Heavy Duty Vehicles</u> (HDVs)



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All new city buses zero-emission as of 2030

FuelEU <u>Maritime</u>

• Increase of reduction targets of GHG intensity of energy used on-board

Annual average carbon intensity reduction compared to the average in 2020

FuelEU Maritime

- Special incentive regime to support the uptake of renewable fuels of non biological origin (RFNBO)
- Obligation for passenger and container ships to use on-shore power supply for all electricity needs while moored at major EU ports as of 2030
- Voluntary pooling mechanism, which allows to pool compliance balance with more ships, with the pool having to meet energy intensity limits on average
- Revenues from regulation's implementation ('FuelEU penalties') used for sector's decarbonisation under enhanced transparency

ReFuelEU <u>Aviation</u>

ReFuelEU Aviation

- Airlines departing from EU airports to refuel aircraft only
 with the fuel necessary for the flight
- **EU airports** to guarantee the **necessary infrastructure** to deliver, store and refuel with sustainable aviation fuels
- Labelling system about environmental performance for aircraft operators will help make consumers informed choices and promote greener flights

Alternative Fuels Infrastructure Regulation (AFIR)

Main deployment targets by 2025 or 2030:

- Recharging infrastructure for cars, vans and heavyduty vehicles (2025)
- Hydrogen refuelling infrastructure that can serve both cars and lorries (2030)
- Maritime ports that see at least 50 port calls by large passenger vessels, or 100 port calls by container vessels, must provide shore-side electricity for such vessels (2030)
- **Airports** must provide electricity to stationary aircraft at all contact stands (2025)

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Revision of the Land Use, Land Use Change and Forestry (LULUCF) Regulation

New targets to increase natural carbon sink (in million tons):

Old target

Current carbon sink

New target

Thank you!

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